



The station's employment application form will contain a notice informing prospective employees that discrimination because of race, color, religion, national origin or sex is prohibited and that they may notify the appropriate local, State or Federal agency if they believe they have been the victims of discrimination.



Appropriate notices will be posted informing applicants and employees that the station is an Equal Opportunity Employer and of their right to notify an appropriate local, State or Federal agency if they believe they have been the victims of discrimination.



We will seek the cooperation of unions, if represented at the station, to help implement our EEO program and all union contracts will contain a nondiscrimination clause.



Other (specify)

IV. RECRUITMENT

To ensure nondiscrimination in relation to minorities and women, and to foster their full consideration whenever job vacancies occur, we propose to utilize the following recruitment procedures:



We will contact a variety of minority and women's organizations to encourage the referral of qualified minority and women applicants whenever job vacancies occur. Examples of organizations we intend to contact are:

NAACP
Women in Communications



In addition to the organizations noted above, which specialize in minority and women candidates, we will deal only with employment services, including State employment agencies, which refer job candidates without regard to their race, color, religion, national origin or sex. Examples of these employment referral services are:

Job Services of Iowa



When we recruit prospective employees from educational institutions such recruitment efforts will include area schools and colleges with minority and women enrollments. Educational institutions to be contacted for recruitment purposes are:

University of Northern Iowa
Hawkeye Tech



When we place employment advertisements with media some of such advertisements will be placed in media which have significant circulation or viewership or are of particular interest to minorities and women. Examples of media to be utilized are:

Waterloo Courier
Radio & Records
KCFI



We will encourage employees to refer qualified minority and women candidates for existing and future job openings.

V. TRAINING

- ☐ Station resources and/or needs will be such that we will be unable or do not choose to institute programs for upgrading the skills of employees.
- ☒ We will provide on-the-job training to upgrade the skills of employees.
- ☐ We will provide assistance to students, schools, or colleges in programs designed to enable qualified minorities and women to compete in the broadcast employment market on an equitable basis:

School or Other Beneficiary
University of Northern Iowa

Proposed Form of Assistance
Internships

☐ Other (specify)

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The principal purpose for which the information will be used is to determine if the application requested is consistent with the public interest. The staff, consisting variously of attorneys, analysts, engineers, and applications examiners, will use the information to determine whether the application should be granted, denied, dismissed, or designated for hearing. If all the information requested is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Accordingly, every effort should be made to provide all necessary information. Your response is required to obtain the requested authority.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, 52 U.S.C. 1701-1705, DECEMBER 31, 1974, E.U.S.C.

ENGINEERING REPORT

IN SUPPORT OF

**APPLICATION
FOR A
CONSTRUCTION PERMIT**

**CHANNEL 253C3
CEDAR FALLS, IOWA**

**DON TIMMERMAN
BROADCASTING CORPORATION**

RUBIN BEDNAREK & ASSOCIATES, INC.
Consulting Telecommunications Engineers
WASHINGTON, DC

RUBIN, BEDNAREK & ASSOCIATES, INC.
CONSULTING TELECOMMUNICATIONS ENGINEERS
1350 CONNECTICUT AVENUE, NW - SUITE 610
WASHINGTON, DC 20036

New - Cedar Falls, Iowa

ENGINEERING STATEMENT

I ABSTRACT

This engineering report supports the application of DON TIMMERMAN BROADCASTING CORPORATION requesting a construction permit authorizing the installation of a frequency modulated broadcasting station to serve Cedar Falls, Iowa.

This application proposes the employment of an omni-directional FM antenna with an effective radiated power of 25.0 kilowatts and a height of 100 meters above average terrain.

This engineering report complies in all respects with all pertinent sections of the FCC rules. All paragraphs answered fully on the attached Section V-B FCC Form 301 will not be repeated in the body of this engineering report.

II RESPONSE TO FCC FORM 301

Paragraph 8:

Exhibit I is a vertical plan sketch of the proposed antenna system.

III ALLOCATION CONSIDERATIONS

Paragraph 13:

The use of channel 253C3 at the proposed location would be fully consistent with all of the required separation criteria contained in Section §73.207 of the rules with respect to all existing and authorized stations or unused channel assignments. Attached as Exhibit II is a tabulation of an allocation study which demonstrates that the operation of channel 253C3 at the proposed site would not create any short spacing(s).

WASHINGTON, DC 20038

V FURTHER RESPONSE TO FCC FORM 301

The distance to the proposed 115 dBu contour, as calculated in accordance with Section §73.318 of the rules, is 1.97 kilometers. There are no known commercial, government receiving stations, cable head-end facilities, or densely populated areas within 1.97 kilometers of the proposed site. There are, however, a limited number of residences within the "blanket contour". In the unlikely event objectionable interference is experienced, the applicant will, in accordance with Section §73.318 of the rules, apply all

RUBIN, BEDNAREK & ASSOCIATES, INC.

CONSULTING TELECOMMUNICATIONS ENGINEERS

1350 CONNECTICUT AVENUE, NW - SUITE 610

WASHINGTON, DC 20036

New - Cedar Falls, Iowa

V FURTHER RESPONSE TO FCC FORM 301

Paragraph 17 - cont.:

This data is available in a data base as census "blocks" which are the smallest census entity having an average population per block of less than 50 persons. Associated with each census block is a set of reference coordinates as determined by the Census Bureau which is referred to as the "centroid". Where the "centroid" of a census block lies within the predicted 1 mV/m contour, the entire census block is included in the population total. Conversely, where the "centroid" is outside the contour, the entire census block is not included in the population total. Over large contours such as those predicted for the proposed facility, the cumulative error of this method of population counting approaches zero.

Paragraph 20:

The proposed construction will have no significant impact on the quality of the human environment and any FCC action with regard to this application would be categorically exempt from environmental processing under Section §1.1306 of the rules. The proposed transmitter site does not fall into any of the categories specified in Section §1.1307(a) of the rules and the use of high intensity obstruction lighting is not contemplated.

The proposed radio facility will comply with the radio frequency protection guidelines contained in the ANSI C95.1-1982 standard (American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz) with respect to all areas accessible to workers or the general public.

Using the procedures found in the OST Bulletin #65 ANSI guidelines, calculations were conducted to determine the radiation level at 2 meters above ground at the tower base and the height on the tower above which the ANSI maximum allowable radiation level of 1 mW/cm² would be exceeded. These calculations, presented in Exhibit VI, show that the radiation level at 2 meters above ground is 0.197 mW/cm² which is well below the ANSI maximum standard of 1mW/cm². The maximum permissible radio frequency radiation produced by the proposed antenna occurs at a point 53.1 meters above the base of the tower. In the event that worker access to the tower is required, the proposed transmitter will be taken off the air prior to any such activity.

RUBIN, BEDNAREK & ASSOCIATES, INC.

CONSULTING TELECOMMUNICATIONS ENGINEERS

1350 CONNECTICUT AVENUE, NW - SUITE 610

WASHINGTON, DC 20036

New - Cedar Falls, Iowa

VI STATEMENT WITH RESPECT TO EMERGENCY POWER

This application proposes the installation and maintenance of auxiliary power at the transmitter and studio location. The instant proposed equipment will be of sufficient capacity to power the transmitter and studio in the event of a power failure at one or both locations.

VII METHODS EMPLOYED

All data and computations contained herein or upon which this engineering report is based are in complete accord with the pertinent requirements of the FCC rules unless otherwise specifically so stated.

Section V-B - FM BROADCAST ENGINEERING DATA

FOR COMMISSION USE ONLY

File No. _____

ASB Referral Date _____

Referred by _____

Name of Applicant

DON TIMMERMAN BROADCASTING CORPORATION

Call letters (if issued)

Is this application being filed in response to a window? ☒ Yes ☐ No

If Yes, specify closing date: May 06, 1992

Purpose of Application: (check appropriate boxes)

☒ Construct a new (main) facility☐ Construct a new auxiliary facility☐ Modify existing construction permit for main facility☐ Modify existing construction permit for auxiliary facility☐ Modify licensed main facility☐ Modify licensed auxiliary facility

If purpose is to modify, indicate below the nature of change(s) and specify the file number(s) of the authorizations affected.

☐ Antenna supporting structure height☐ Effective radiated power☐ Antenna height above average terrain☐ Frequency☐ Antenna location☐ Class☐ Main Studio location☐ Other (Summarize briefly)

File Number(s) _____

1. Allocation:

Channel No.	Principal community to be served:		
	City	County	State
253	Cedar Falls	Black Hawk	IA

Class (check only one box below)

☐ A ☐ B1 ☐ B ☒ C3☐ C2 ☐ C1 ☐ C

2. Exact location of antenna.

(a) Specify address, city, county and state. If no address, specify distance and bearing relative to the nearest town or landmark. Approximately 2.2 kilometers of Raymond, Black Hawk County, Iowa.

(b) Geographical coordinates (to nearest second). If mounted on element of an AM array, specify coordinates of center of array. Otherwise, specify tower location. Specify South Latitude or East Longitude where applicable; otherwise, North Latitude or West Longitude will be presumed.

Latitude	42°	29'	19"	Longitude	92°	13'	04"
----------	-----	-----	-----	-----------	-----	-----	-----

3. Is the supporting structure the same as that of another station(s) or proposed in another pending application(s)? ☐ Yes ☒ No

If Yes, give call letter(s) or file number(s) or both.

N/A

If proposal involves a change in height of an existing structure, specify existing height above ground level including antenna, all other appurtenances, and lighting, if any.

N/A

SECTION V-B - FM BROADCAST ENGINEERING DATA (Page 2)

4. Does the application propose to correct previous site coordinates?
If Yes, list old coordinates.

☐ Yes ☒ No

Latitude	°	'	"	Longitude	°	'	"
----------	---	---	---	-----------	---	---	---

5. Has the FAA been notified of the proposed construction?

☒ Yes ☐ No

If Yes, give date and office where notice was filed and attach as an Exhibit a copy of FAA determination, if available.

Exhibit No. VII

Date May 1, 1992 Office where filed Central Region

6. List all landing areas within 8 km of antenna site. Specify distance and bearing from structure to nearest point of the nearest runway.

Landing Area	Distance (km)	Bearing (degrees True)
(a) <u>East Waterloo</u>	<u>3.9</u>	<u>N 289° E</u>
(b) <u>Flyers</u>	<u>6.7</u>	<u>N 200° E</u>

7. (a) Elevation: (to the nearest meter)

(1) of site above mean sea level; 274 meters

(2) of the top of supporting structure above ground (including antenna, all other appurtenances, and lighting, if any); and 111 meters

(3) of the top of supporting structure above mean sea level [(a)(1) + (a)(2)] 385 meters

- (b) Height of radiation center: (to the nearest meter) H - Horizontal; V - Vertical

(1) above ground 102 meters (H)

102 meters (V)

(2) above mean sea level [(a)(1) + (b)(1)] 376 meters (H)

376 meters (V)

(3) above average terrain 100 meters (H)

100 meters (V)

8. Attach as an Exhibit sketch(es) of the supporting structure, labelling all elevations required in Question 7 above, except item 7(b)(3). If mounted on an AM directional-array element, specify heights and orientations of all array towers, as well as location of FM radiator.

Exhibit No. I

9. Effective Radiated Power:

- (a) ERP in the horizontal plane

25.0 kw (H) 25.0 kw (V)

- (b) Is beam tilt proposed?

☐ Yes ☒ No

If Yes, specify maximum ERP in the plane of the tilted beam, and attach as an Exhibit a vertical elevational plot of radiated field.

Exhibit No. N/A

 kw (H) kw (V)

=Polarization

10. Is a directional antenna proposed?

☐ Yes ☒ No

If Yes, attach as an Exhibit a statement with all data specified in 47 C.F.R. Section 73.316, including plot(s) and tabulations of the relative field.

Exhibit No.
N/A

11. Will the proposed facility satisfy the requirements of 47 C.F.R. Sections 73.315(a) and (b)?

☒ Yes ☐ No

If No, attach as an Exhibit a request for waiver and justification therefor, including amounts and percentages of population and area that will not receive 816 mV/m service.

Exhibit No.
N/A

12. Will the main studio be within the protected 816 mV/m field strength contour of this proposal?

☒ Yes ☐ No

If No, attach as an Exhibit justification pursuant to 47 C.F.R. Section 73.1125.

Exhibit No.
N/A

13. (a) Does the proposed facility satisfy the requirements of 47 C.F.R. Section 73.207?

☒ Yes ☐ No

(b) If the answer to (a) is No, does 47 C.F.R. Section 73.218 apply?

☐ Yes ☐ No

(c) If the answer to (b) is Yes, attach as an Exhibit a justification, including a summary of previous waivers.

Exhibit No.
N/A

(d) If the answer to (a) is No and the answer to (b) is No, attach as an Exhibit a statement describing the short spacing(s) and how it or they arose.

Exhibit No.
N/A

(e) If authorization pursuant to 47 C.F.R. Section 73.215 is requested, attach as an Exhibit a complete engineering study to establish the lack of prohibited overlap of contours involving affected stations. The engineering study must include the following:

Exhibit No.
N/A

- (1) Protected and interfering contours, in all directions (360°), for the proposed operation.
- (2) Protected and interfering contours, over pertinent area, of all short-spaced assignments, applications and allotments, including a plot showing each transmitter location, with identifying call letters or file numbers, and indication of whether facility is operating or proposed. For vacant allotments, use the reference coordinates as the transmitter location.
- (3) When necessary to show more detail, an additional allocation study utilizing a map with a larger scale to clearly show prohibited overlap will not occur.
- (4) A scale of kilometers and properly labeled longitude and latitude lines, shown across the entire exhibit(s). Sufficient lines should be shown so that the location of the sites may be verified.
- (5) The official title(s) of the map(s) used in the exhibit(s).

14. Are there: (a) within 60 meters of the proposed antenna, any proposed or authorized FM or TV transmitters, or any nonbroadcast (except citizens band or amateur) radio stations; or (b) within the blanketing contour, any established commercial or government receiving stations, cable head-end facilities, or populated areas; or (c) within ten (10) kilometers of the proposed antenna, any proposed or authorized FM or TV transmitters which may produce receiver-induced intermodulation interference?

☒ Yes ☐ No

If Yes, attach as an Exhibit a description of any expected, undesired effects of operations and remedial steps to be pursued if necessary, and a statement accepting full responsibility for the elimination of any objectionable interference (including that caused by receiver-induced or other types of modulation) to facilities in existence or authorized or to radio receivers in use prior to grant of this application. (See 47 C.F.R. Sections 73.315(b), 73.316(a) and 73.318.)

Exhibit No.
III

15. Attach as an Exhibit a 7.5 minute series U.S. Geological Survey topographic quadrangle map that shows clearly, legibly, and accurately, the location of the proposed transmitting antenna. This map must comply with the requirements set forth in Instruction V. The map must further clearly and legibly display the original printed contour lines and data as well as latitude and longitude markings, and must bear a scale of distance in kilometers.

Exhibit No.
IV

16. Attach as an Exhibit *(name the source)* a map which shows clearly, legibly, and accurately, and with the original printed latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.
V

(a) the proposed transmitter location, and the radials along which profile graphs have been prepared;

(b) the 616 mV/m and 1 mV/m predicted contours; and

(c) the legal boundaries of the principal community to be served.

17. Specify area in square kilometers (1 sq. mi. = 259 sq. km.) and population (latest census) within the predicted 1 mV/m contour.

Area 4,777 sq. km. Population 185,080

18. For an application involving an auxiliary facility only, attach as an Exhibit a map *(Sectional Aeronautical Chart or equivalent)* that shows clearly, legibly, and accurately, and with latitude and longitude markings and a scale of distance in kilometers:

Exhibit No.
N/A

(a) the proposed auxiliary 1 mV/m contour; and

(b) the 1 mV/m contour of the licensed main facility for which the applied-for facility will be auxiliary. Also specify the file number of the license.

19. Terrain and coverage data *(to be calculated in accordance with 47 C.F.R. Section 73.313)*

Source of terrain data: *(check only one box below)*

☒ Linearly interpolated 80-second database ☐ 7.5 minute topographic map

(Source: NGDC)

☐ Other *(briefly summarize)*

PROPOSED ANTENNA

OVERALL HEIGHT : 384.6m (1262') AMSL

RADIATION CENTER: 376.1m (1234') AMSL

110.5m (362') AGL

102m (334') AGL

SITE ELEVATION : 274.1m (900') AMSL

EXHIBIT I

VERTICAL PLAN SKETCH OF PROPOSED
ANTENNA AND SUPPORTING STRUCTURE
CEDAR FALLS, IOWA

DON TIMMERMAN
BROADCASTING CORPORATION
MAY 1992

RUBIN, BEDNAREK & ASSOCIATES, INC.
TELECOMMUNICATIONS CONSULTING ENGINEERS
WASHINGTON, DC

NOTE :
NOT DRAWN TO SCALE

RUBIN, BEDNAREK & ASSOCIATES, INC.
CONSULTING TELECOMMUNICATIONS ENGINEERS
1350 CONNECTICUT AVENUE, NW - SUITE 610
WASHINGTON, DC 20036

New - Cedar Falls, Iowa

EXHIBIT II - Page 1

FM ALLOCATION STUDY

Channel 253C3

N 42° 29' 19"

W 92° 13' 04"

Call City of License	Auth Licensee name St	FCC File no.	Chan ERP-kw Freq EAH-m	Latitude Longitude	Br-to -from	Dist. (km)	Req. (km)
KAAL AUSTIN	LIC THE WOOSTER REPUBLICAN P MN		6 100 85.0 320	43-37-42 93-09-12	329.4 312.5	147.8 124.8	23 CLEAR
WNDN-FM Concord	APC Catawba College NC		*200D .01 87.9 30	35-27-01 80-38-05	124.2 311.6	1272	
ALLOC Mason City		IA DOC-88-141	250A 97.9	43-07-18 93-11-32	311.9 131.2	106.3 64.30	42 CLEAR
EFFECTIVE 09-11-89-RSVD FOR KCMR PER D88-141							
ALLOC Cedar Rapids		IA	251C1 98.1	41-55-28 91-36-55	141.5 321.9	80.02 4.016	76 CLOSE
KHAK-FM Cedar Rapids	LIC Quass Broadcasting Compa IA BLH-790823AG		251C1 100 98.1 140	41-55-28 91-36-55	141.5 321.9	80.02 4.016	76 CLOSE
KQYB Spring Grove	LIC Sun Communications, Inc. MN BLH-851125KC		252A 2.40 98.3 111	43-33-24 91-39-40	20.7 201.0	127.0 38.03	89 CLEAR
*TO CHANNEL 252C2 PER D88-141							
ALLOC Spring Grove		MN DOC-88-141	252C2 98.3	43-40-37 91-44-14	16.3 196.6	137.7 20.69	117 CLEAR
KQYB Spring Grove	CP Sun Communications, Inc. MN BMPH-900504IB		252C2 33 98.3 185	43-40-53 91-45-28	15.6 195.9	137.7 20.70	117 CLEAR
KIAB Boone	CP G.O. Radio Boone, Inc. IA BPH-900919II		252C3 12.5 98.3 143	41-58-49 93-44-23	246.2 65.2	137.7 38.74	99 CLEAR
From Channel 252A per D89-334							
PRM Boone	DEL Radio Ingstad of Iowa, I IA		252C3 98.3	41-58-49 93-44-23	246.2 65.2	137.7 38.74	99 CLEAR
PDM	ADD Radio Ingstad of Iowa, I		252C3	41-58-49	246.2	137.7	99

RUBIN, BEDNAREK & ASSOCIATES, INC.

CONSULTING TELECOMMUNICATIONS ENGINEERS

1350 CONNECTICUT AVENUE, NW - SUITE 610

WASHINGTON, DC 20036

New - Cedar Falls, Iowa**EXHIBIT II - Page 2****FM ALLOCATION STUDY**

Channel 253C3

N 42° 29' 19"

W 92° 13' 04"

Call City of License	Auth Licensee name St FCC File no.	Chan Freq	ERP-kW EAH-m	Latitude Longitude	Br-to -from	Dist. (km)	Req. (km)
ALLOC Cedar Falls	IA DOC-89-592	253C3 98.5		42-31-30 92-27-06	282.0 101.8	19.65 -133	153 SHORT
Filing window 04/06-05/06/92; Effective 04-03-92							
ALLOC Freeport	IL	253B 98.5		42-18-45 89-35-38	94.3 276.1	216.9 5.912	211 CLOSE
WXXQ Freeport	LIC Freeport Radio Associate IL BLH-840321AC	253B 98.5	50 122	42-18-45 89-35-38	94.3 276.1	216.9 5.912	211 CLOSE
PRM Osage	ADD Mad Hatter Broadcasting, IA DOC-91-103	254A 98.7		43-19-20 92-51-22	330.9 150.5	106.3 17.27	89 CLEAR
ALLOC Hampton	IA DOC-87-363	255A 98.9		42-44-30 93-12-30	289.5 108.8	86 44	42 CLEAR
Filing window 05/03-06/02/88 **CLOSED** ; EFFECTIVE 5-2-88							
NEW Hampton	CP John Linder IA BPH-910219MK	255A 98.9	6 98	42-39-15 93-14-37	282.7 102.0	86.21 44.21	42 CLEAR
ALLOC Brooklyn	IA DOC-88-263	256C2 99.1		41-42-36 92-27-54	193.3 13.2	88.87 32.87	56 CLEAR
KSKB Brooklyn	CP Florida Public Radio, In IA BPH-900130IG	256C2 99.1	50 150	41-42-36 92-27-54	193.3 13.2	88.87 32.87	56 CLEAR

RUBIN, BEDNAREK & ASSOCIATES, INC.

CONSULTING TELECOMMUNICATIONS ENGINEERS

1350 CONNECTICUT AVENUE, NW - SUITE 610

WASHINGTON, DC 20036

New - Cedar Falls, Iowa

EXHIBIT III

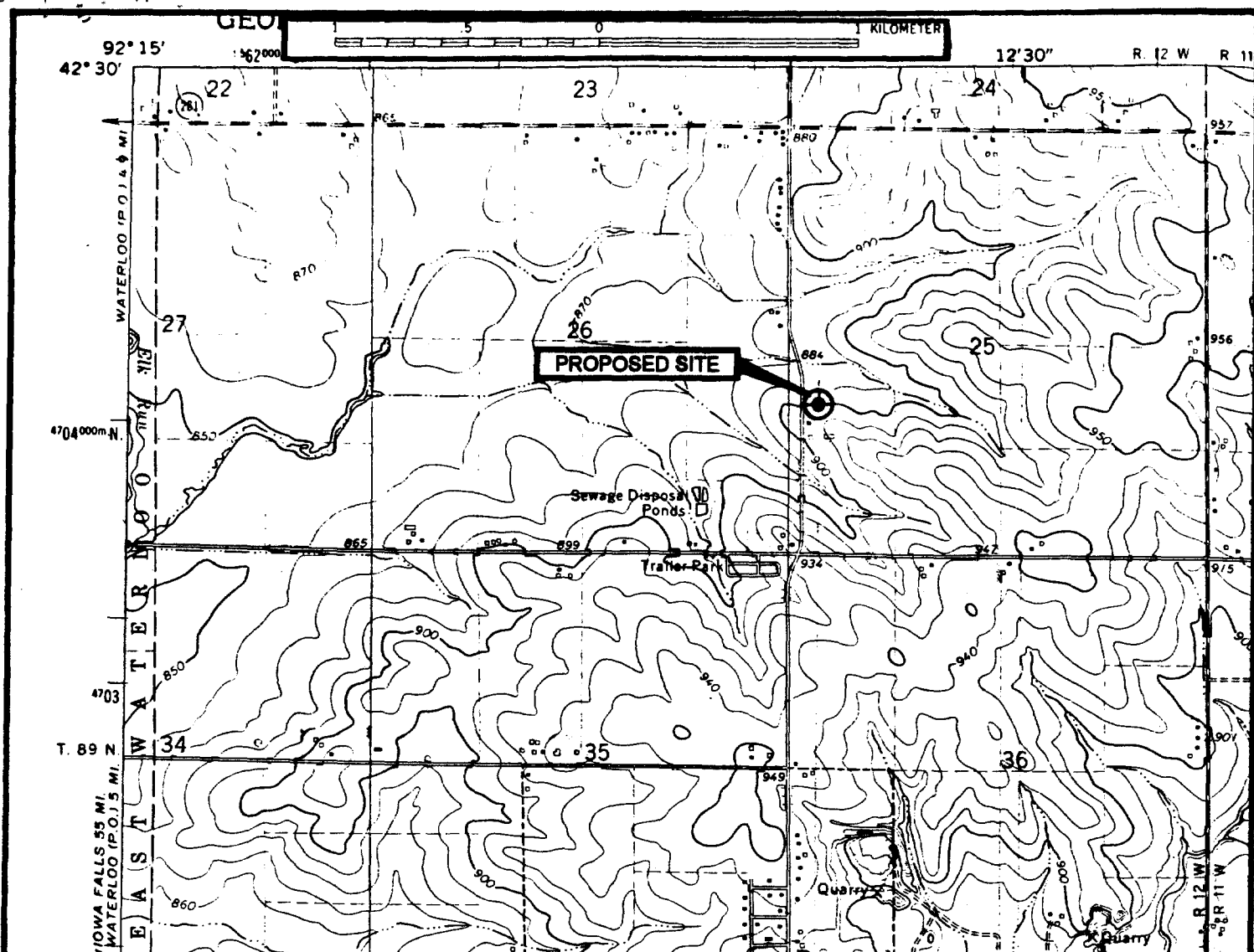
FM and TV Stations Within 10 Kilometers of Proposed Site

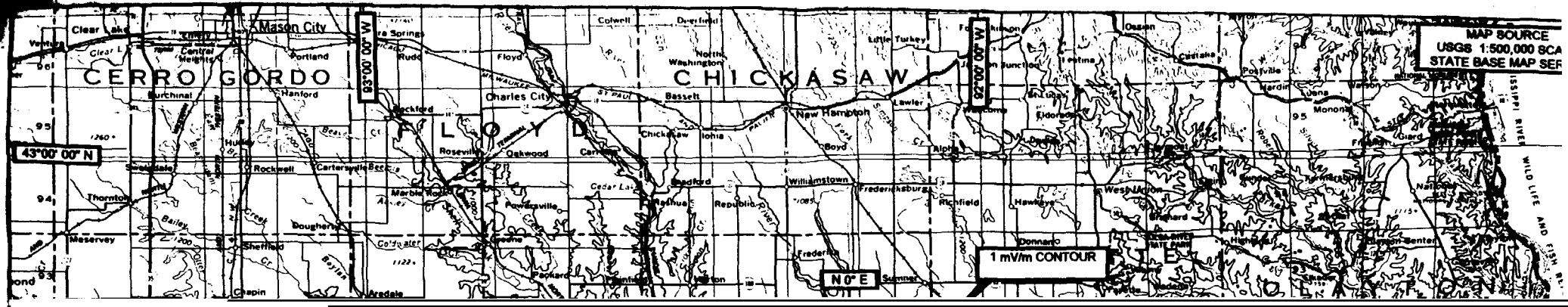
N 42° 29' 19"

W 92° 13' 04"

FM Stations

Call	Auth	Licensee name	Channel	H-kW	V-kW	Latitude	Br-to	Dist
City of license	St	FCC file no.	freq	H-m	V-m	Longitude	-from	(km)





RUBIN, BEDNAREK & ASSOCIATES, INC.
CONSULTING TELECOMMUNICATIONS ENGINEERS
1350 CONNECTICUT AVENUE, NW - SUITE 610
WASHINGTON, DC 20036

New - Cedar Falls, Iowa

Exhibit VI

Radio Frequency Radiation Level Calculations

The maximum allowable radio frequency radiation at frequencies between 30 and 300 MHz is 1mW/cm² according to the radio frequency protection guidelines contained in the ANSI C95.1-1982 standard (American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz).

The following equation was extracted from OST Bulletin #65 and was used to determine radiation level at 2 meters above the ground for the specified antenna configuration:

$$S = \frac{(2.56)(1.64)(2)(ERP \text{ watts})(F^2)(1000mW / watt)}{4\pi(R^2)}$$

where: S = power density (mW/cm²)
 F = relative field factor in downward direction (worst case = 1.0)
 R = distance to the center of radiation (cm)

The following variation of the above equation was used to determine the distance from the center of radiation of the specified antenna configuration to the maximum allowable radiation level of 1 mW/cm²:

$$R = \sqrt{\frac{(2.56)(1.64)(2)(ERP \text{ watts})(F^2)(1000mW / watt)}{4\pi(S)}}$$

For a multiple element radiator, the ERP is assumed to be concentrated at the lowest element of the antenna.

RUBIN, BEDNAREK & ASSOCIATES, INC.

CONSULTING TELECOMMUNICATIONS ENGINEERS

1350 CONNECTICUT AVENUE, NW - SUITE 610

WASHINGTON, DC 20036

New - Cedar Falls, Iowa

Exhibit VI - (continued)

Radio Frequency Radiation Level Calculations

Calculations to determine radiation level at ground level (S_{2mAGL}) for the proposed antenna.

$$S = \frac{(2.56)(1.64)(2)(ERP \text{ watts})(F^2)(1000mW / watt)}{4\pi(R^2)}$$

$$S = \frac{(2.56)(1.64)(2)(25,000)(1^2)(1000mW / watt)}{4\pi(9200)^2}$$

$$S_{2mAGL} = 0.197mW/cm^2$$

Calculations to determine the height on the tower (H) above which the ANSI maximum allowable radiation level of 1 mW/cm² would be exceeded.

$$R = \sqrt{\frac{(2.56)(1.64)(2)(ERP \text{ watts})(F^2)(1000mW / watt)}{4\pi(S)}}$$

$$R = \sqrt{\frac{(2.56)(1.64)(2)(25,000)(1^2)(1000mW / watt)}{4\pi(1mW/cm^2)}}$$

$$R = 4087.2m = 40.9m$$

$H = \text{Height of lowest antenna element} - R$

$$H = 94m - 40.9m = 53.1m$$

DO NOT REMOVE CARBONS

Form Approved OMB No. 2120-0001

NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION			Aeronautical Study Number							
1. Nature of Proposal <table style="width: 100%;"> <tr> <td style="width: 33%;"> A. Type <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration </td> <td style="width: 33%;"> B. Class <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Temporary (Duration _____ months) </td> <td style="width: 33%;"> C. Work Schedule Dates Beginning <u>Contingent upon</u> End <u>FCC grant</u> </td> </tr> </table>			A. Type <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration	B. Class <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Temporary (Duration _____ months)	C. Work Schedule Dates Beginning <u>Contingent upon</u> End <u>FCC grant</u>	2. Complete Description of Structure A. Include effective radiated power and assigned frequency of all existing, proposed or modified AM, FM, or TV broadcast stations utilizing this structure. B. Include size and configuration of power transmission lines and their supporting towers in the vicinity of FAA facilities and public airports. C. Include information showing site orientation, dimensions, and construction materials of the proposed structure. Constant cross-section guyed steel tower supporting a side mounted FM Antenna. Frequency: 98.5 MHz ERP : 25 kW (See attached tower sketch) <i>(If more space is required, continue on a separate sheet.)</i>				
A. Type <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration	B. Class <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Temporary (Duration _____ months)	C. Work Schedule Dates Beginning <u>Contingent upon</u> End <u>FCC grant</u>								
3. Name and address of individual, company, corporation, etc. proposing the construction or alteration. (Number, Street, City, State and Zip Code) (319) 984-6423 area code Telephone Number <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> Don Timmerman Don Timmerman Broadcasting Corporation 315 Clay Street, Box 627 Cedar Falls, IA 50613 </div>			5. Height and Elevation (Complete to the nearest foot) <table style="width: 100%;"> <tr> <td style="width: 80%;"> A. Elevation of site above mean sea level </td> <td style="width: 20%; text-align: center;">900'</td> </tr> <tr> <td> B. Height of Structure including all appurtenances and lighting (if any) above ground, or water if so situated </td> <td style="text-align: center;">362'</td> </tr> <tr> <td> C. Overall height above mean sea level (A + B) </td> <td style="text-align: center;">1262'</td> </tr> </table>		A. Elevation of site above mean sea level	900'	B. Height of Structure including all appurtenances and lighting (if any) above ground, or water if so situated	362'	C. Overall height above mean sea level (A + B)	1262'
A. Elevation of site above mean sea level	900'									
B. Height of Structure including all appurtenances and lighting (if any) above ground, or water if so situated	362'									
C. Overall height above mean sea level (A + B)	1262'									
4. Location of Structure <table style="width: 100%;"> <tr> <td style="width: 20%;"> A. Coordinates (To nearest second) 42° 29' 19" Latitude 92° 13' 04" Longitude </td> <td style="width: 20%;"> B. Nearest City or Town, and State Raymond, Iowa 1.36 Miles </td> <td style="width: 60%;"> C. Name of nearest airport, heliport, flight park, or seaplane base East Waterloo (1) Distance from structure to nearest point of nearest runway 1.4 miles (2) Direction from structure to airport N 289° E </td> </tr> </table>			A. Coordinates (To nearest second) 42° 29' 19" Latitude 92° 13' 04" Longitude	B. Nearest City or Town, and State Raymond, Iowa 1.36 Miles	C. Name of nearest airport, heliport, flight park, or seaplane base East Waterloo (1) Distance from structure to nearest point of nearest runway 1.4 miles (2) Direction from structure to airport N 289° E	6. Description of location of site with respect to highways, streets, airports, prominent terrain features, existing structures, etc. Attach a U.S. Geological Survey quadrangle map or equivalent showing the relationship of construction site to nearest airport(s). (If more space is required, continue on a separate sheet of paper and attach to this notice.) Approximately 1.69 miles north of the intersection of U.S. Route 20 and State Route 297, Raymond, Black Hawk County, Iowa.				
A. Coordinates (To nearest second) 42° 29' 19" Latitude 92° 13' 04" Longitude	B. Nearest City or Town, and State Raymond, Iowa 1.36 Miles	C. Name of nearest airport, heliport, flight park, or seaplane base East Waterloo (1) Distance from structure to nearest point of nearest runway 1.4 miles (2) Direction from structure to airport N 289° E								
7. Description of location of site with respect to highways, streets, airports, prominent terrain features, existing structures, etc. Attach a U.S. Geological Survey quadrangle map or equivalent showing the relationship of construction site to nearest airport(s). (If more space is required, continue on a separate sheet of paper and attach to this notice.) Approximately 1.69 miles north of the intersection of U.S. Route 20 and State Route 297, Raymond, Black Hawk County, Iowa.										
<p><small>Notice is required by Part 77 of the Federal Aviation Regulations (14 C.F.R. Part 77) pursuant to Section 1101 of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1101). Persons who knowingly and willingly violate the Notice requirements of Part 77 are subject to a fine (criminal penalty) of not more than \$500 for the first offense and not more than \$2,000 for subsequent offenses, pursuant to Section 803(a) of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1472 (a)).</small></p> <p>I HEREBY CERTIFY that all of the above statements made by me are true, complete, and correct to the best of my knowledge. In addition, I agree to obstruction mark and/or light the structure in accordance with established marking & lighting standards if necessary.</p>										
<table style="width: 100%;"> <tr> <td style="width: 20%;"> Date 5/1/92 </td> <td style="width: 40%;"> Typed Name/Title of Person Filing Notice Melvyn Lieberman/Consulting Engineer </td> <td style="width: 40%;"> Signature </td> </tr> </table>					Date 5/1/92	Typed Name/Title of Person Filing Notice Melvyn Lieberman/Consulting Engineer	Signature 			
Date 5/1/92	Typed Name/Title of Person Filing Notice Melvyn Lieberman/Consulting Engineer	Signature 								
<p>FOR FAA USE ONLY <i>FAA will either return this form or issue a separate acknowledgement.</i></p> <table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> The Proposal: <input type="checkbox"/> Does not require a notice to FAA. <input type="checkbox"/> Is not identified as an obstruction under any standard of FAR, Part 77, Subpart C, and would not be a hazard to air navigation. <input type="checkbox"/> Is identified as an obstruction under the standards of FAR, Part 77, Subpart C, but would not be a hazard to air navigation. <input type="checkbox"/> Should be obstruction <input type="checkbox"/> marked, <input type="checkbox"/> lighted per FAA Advisory Circular 70/7460-1, Chapter(s) _____ <input type="checkbox"/> Obstruction marking and lighting are not necessary. </td> <td style="width: 50%; vertical-align: top;"> Supplemental Notice of Construction FAA Form 7460-2 is required any time the project is abandoned, or <input type="checkbox"/> At least 48 hours before the start of construction. <input type="checkbox"/> Within five days after the construction reaches its greatest height. This determination expires on _____ (a) extended, revised or terminated by the issuing office; (b) the construction is subject to the licensing authority of the Federal Communications Commission and an application for a construction permit is made to the FCC on or before the above expiration date. In such case the determination expires on the date prescribed by the FCC for completion of construction, or on the date the FCC denies the application. NOTE: Request for extension of the effective period of this determination must be postmarked or delivered to the issuing office at least 15 days prior to the expiration date. If the structure is subject to the licensing authority of the FCC, a copy of this determination will be sent to that Agency. </td> </tr> </table>					The Proposal: <input type="checkbox"/> Does not require a notice to FAA. <input type="checkbox"/> Is not identified as an obstruction under any standard of FAR, Part 77, Subpart C, and would not be a hazard to air navigation. <input type="checkbox"/> Is identified as an obstruction under the standards of FAR, Part 77, Subpart C, but would not be a hazard to air navigation. <input type="checkbox"/> Should be obstruction <input type="checkbox"/> marked, <input type="checkbox"/> lighted per FAA Advisory Circular 70/7460-1, Chapter(s) _____ <input type="checkbox"/> Obstruction marking and lighting are not necessary.	Supplemental Notice of Construction FAA Form 7460-2 is required any time the project is abandoned, or <input type="checkbox"/> At least 48 hours before the start of construction. <input type="checkbox"/> Within five days after the construction reaches its greatest height. This determination expires on _____ (a) extended, revised or terminated by the issuing office; (b) the construction is subject to the licensing authority of the Federal Communications Commission and an application for a construction permit is made to the FCC on or before the above expiration date. In such case the determination expires on the date prescribed by the FCC for completion of construction, or on the date the FCC denies the application. NOTE: Request for extension of the effective period of this determination must be postmarked or delivered to the issuing office at least 15 days prior to the expiration date. If the structure is subject to the licensing authority of the FCC, a copy of this determination will be sent to that Agency.				
The Proposal: <input type="checkbox"/> Does not require a notice to FAA. <input type="checkbox"/> Is not identified as an obstruction under any standard of FAR, Part 77, Subpart C, and would not be a hazard to air navigation. <input type="checkbox"/> Is identified as an obstruction under the standards of FAR, Part 77, Subpart C, but would not be a hazard to air navigation. <input type="checkbox"/> Should be obstruction <input type="checkbox"/> marked, <input type="checkbox"/> lighted per FAA Advisory Circular 70/7460-1, Chapter(s) _____ <input type="checkbox"/> Obstruction marking and lighting are not necessary.	Supplemental Notice of Construction FAA Form 7460-2 is required any time the project is abandoned, or <input type="checkbox"/> At least 48 hours before the start of construction. <input type="checkbox"/> Within five days after the construction reaches its greatest height. This determination expires on _____ (a) extended, revised or terminated by the issuing office; (b) the construction is subject to the licensing authority of the Federal Communications Commission and an application for a construction permit is made to the FCC on or before the above expiration date. In such case the determination expires on the date prescribed by the FCC for completion of construction, or on the date the FCC denies the application. NOTE: Request for extension of the effective period of this determination must be postmarked or delivered to the issuing office at least 15 days prior to the expiration date. If the structure is subject to the licensing authority of the FCC, a copy of this determination will be sent to that Agency.									
Remarks: 										
Issued in 		Signature 		Date 						

RUBIN, BEDNAREK & ASSOCIATES, INC.

CONSULTING TELECOMMUNICATIONS ENGINEERS

1350 CONNECTICUT AVENUE, NW - SUITE 810

WASHINGTON, DC 20038

DECLARATION

MELVYN LIEBERMAN, declares and certifies as follows:

That he is associated with the firm of RUBIN, BEDNAREK & ASSOCIATES;

That this firm has been retained by DON TIMMERMAN BROADCASTING CORPORATION to prepare this application requesting a construction permit authorizing the installation of an FM broadcasting station to serve Cedar Falls, Iowa;

That his qualifications are a matter of record with the Federal Communications Commission;

That he has either prepared or directly supervised the preparation of all technical material contained in this engineering exhibit and that the facts stated in this application are true of his knowledge and belief except as to such statements as are herein stated to be on information and belief and as to such statements he believes them to be true.

5/1/92
Date

Melvyn Lieberman
Melvyn Lieberman